



Reaction Injection Moulding



“To be the chosen supplier for Reaction Injection Moulding Systems... Based on Performance, Quality and Reliability”

Contents



| | |
|-----------------------------------|----|
| About Reaction Injection Moulding | 4 |
| System Models | |
| GR5 | 5 |
| GR15 | 6 |
| GR30 | 7 |
| GR60 | 8 |
| System Options | 9 |
| System Interface | 10 |
| Spares and Accessories | 11 |
| Auto Tank Top Up | 12 |
| Contact info | 13 |

About Our Reaction Injection Moulding Systems

Grunfeld Reaction Injection Moulding Systems; for the dispense of two-component RIM Resins.

Reaction injection moulding (RIM) is a type of low pressure injection moulding where thermosetting polymers are used, which requires a curing reaction to occur within the mould. Typically, these resins are based on polyurethane chemistry but can include polyureas, polyisocyanurates, polyesters, polyphenols, polyepoxides, and polydicyclopentadiene or pDCPD.

Grunfeld Manufacture a range of RIM Injection machines which accurately meter and mix the resins injecting the resins into the mould tooling.

We offer a complete range of systems from very small benchtop systems right up to high volume units with high flow Dynamic Mixing heads.

Once resin and hardener components are loaded into the system it is important to preserve the materials and prevent unwanted ingress of moisture which can cause quality issues with finished parts. As standard, all of our units utilise stainless steel tanks with lockable gas tight lids fitted with desiccant breathers to absorb moisture. Variable speed controls enable users to select both ratio and injection speeds according to the component size being moulded.

All of our systems feature the following standard features

PLC Controlled, the mix ratio is changed via operator input HMI touch screen. To change dispense speed/output the operator can choose between pre-sets or dial-up a speed of their choice – all on the touch screen – the program automatically calculates and maintains the correct ratio regardless of speed selected. Ability to create and store recipe parameters.

PTFE core, high-pressure hoses keep moisture away from the Isocyanate and remove the risk of crystallization or curing in the lines.

Heavy Duty Static Mixing Autovalve Gun.

Electronic Pressure Monitoring.

All systems are fully UKCA and CE Certified.

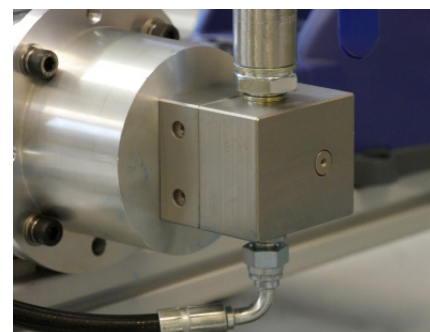
Available in various output sizes (litres per minute) to suit mould sizes and injection methods.

GR5



The GR5 is the smallest System in the range, it is a bench top system, ideal for shooting small parts.

| | |
|--|--|
| Ratio | Fully adjustable from the touch screen |
| Tank Size | 2 x 2 Litres or 2 x 10 Litres |
| Litres Per Minute Dispense | 1.5 Litres |
| Power Supply | 1PH 230v or 3PH 400v |
| Motor Size | 2 x 0.55KW |
| Triple Sealed Pumps with Barrier Chamber | Optional |



GR15



The GR15 is a small mid sized, bench top or floor standing system, ideal for shooting small to mid sized parts.

| | |
|--|--|
| Ratio | Fully adjustable from the touch screen |
| Tank Size | 2 x 20 Litres |
| Litres Per Minute Dispense | 4 Litres |
| Power Supply | 1PH 230v or 3PH 400v |
| Motor Size | 2 x 1.1KW |
| Triple Sealed Pumps with Barrier Chamber | Optional |



GR30



The GR30 is a mid sized, floor standing mobile System, ideal for shooting a wide variety of parts.

| | |
|--|--|
| Ratio | Fully adjustable from the touch screen |
| Tank Size | 2 x 30 Litres |
| Litres Per Minute Dispense | 7 Litres |
| Power Supply | 1PH 230v or 3PH 400v |
| Motor Size | 2 x 1.5KW |
| Triple Sealed Pumps with Barrier Chamber | Yes |



GR60



The GR60 is a large System, the system can provide you with a full solution to your RIM requirements.

| | |
|--|--|
| Ratio | Fully adjustable from the touch screen |
| Tank Size | 2 x 50 Litres |
| Litres Per Minute Dispense | 16 Litres |
| Power Supply | 3PH 400v |
| Motor Size | 2 x 5KW |
| Triple Sealed Pumps with Barrier Chamber | Yes |

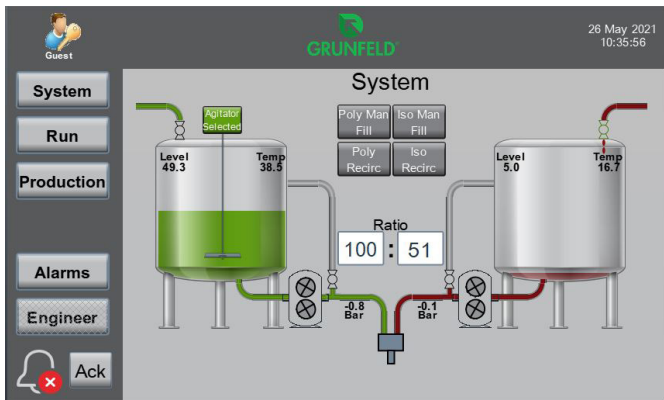


System Options



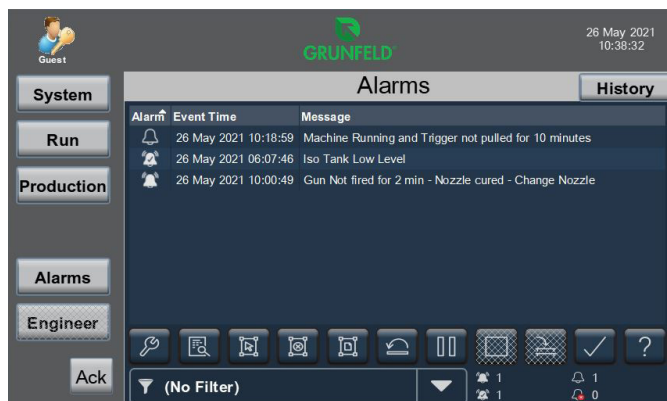
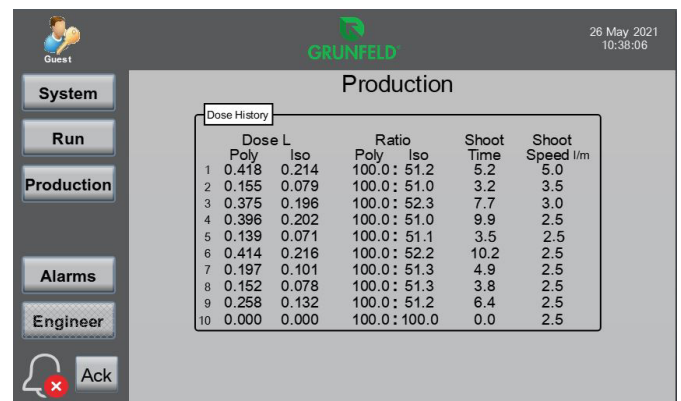
| Option | System Option |
|---------------------|--------------------|
| Level Sensors | GR5/GR15/GR30/GR60 |
| Tank Temperature | GR5/GR15/GR30/GR60 |
| Tank Heaters | GR5/GR15/GR30/GR60 |
| Agitator | GR15/GR30/GR60 |
| Recirculation | GR15/GR30/GR60 |
| Flow Meters | GR5/GR15/GR30/GR60 |
| Pressure Sensors | GR5/GR15/GR30/GR60 |
| Auto Tank Top Up | GR15/GR30/GR60 |
| Nitrogen Purge | GR15/GR30/GR60 |
| Hardened Gear Pumps | GR15/GR30/GR60 |
| Dynamic Mix Head | GR15/GR30/GR60 |
| pDCPD Option | GR60 |

System Interface



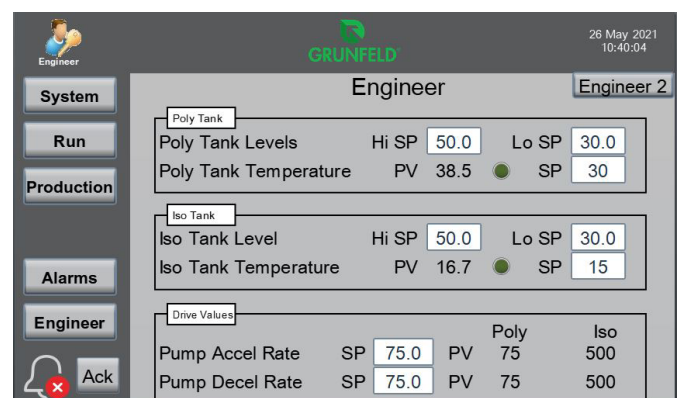
Our systems have an intuitive interface making the system easy to understand and use. You can access all system settings through the HMI.

Built in production records means that production information is stored on the system.



Comprehensive alarm screens help you fault find easily from the HMI.

The engineer screen allows you to make program adjustments. This gives you full control over the system providing you with flexibility.

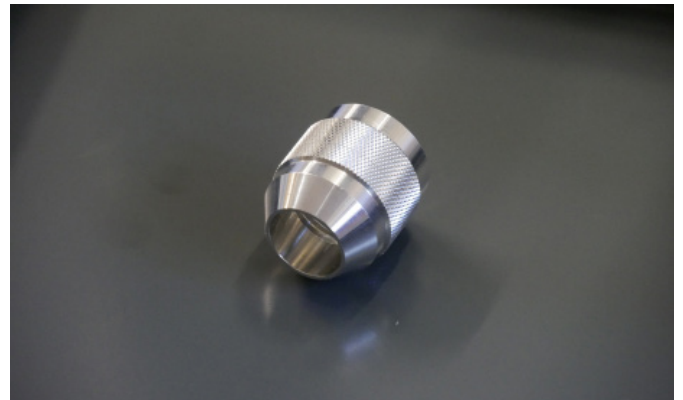


Spares and Accessories



We supply spares kits for wearing parts meaning you can minimise downtime.

Nozzle retainers, ratio check nozzles and night caps - all in stock.



Small quantities or bulk quantities of mix nozzles available.

Full change sets of hoses, specified to the application. With optional hose marking available.



Auto Tank Top Up



Our systems can have Auto Tank Top up as an option. Pairing the system with one of the Grunfeld Bulk Transfer Pumps provides you with Fully Automatic Tank Top Up.

The Bulk Transfer Pump, transfers the liquid from the bulk storage vessel to the RIM systems tanks. The level sensors in the tank fed information to the transfer pump so it knows when the tanks need topping up. This means that you never need to worry about the tanks emptying.

These pumps are available in hygienic versions for rapid disassembly and cleaning.

We can help you specify the correct Transfer Pump for Auto Top Up based on:

- Application.
- Viscosity.
- Required litres per minute.

*“We are always ready to hear about your requirements
...Get in Touch!”*

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